http://ejournal.seaninstitute.or.id/index.php/healt
Jurnal eduhealth, Volume 14, No 01, 2023
E-ISSN. 2808-4608

The Relationship between the Use Of 3-Month Injectable Contraceptives and Weight Gain at Berkah House of Midwife Katmi Bekasi District in 2022

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ARTICLE INFO

Keywords:
3-Month Injectable Contraceptive,
Weight Gain,
Birth Control Acceptor

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ABSTRACT

The most popular hormonal contraceptive in West Java is 3-month injectable birth control. with the most common side effect experienced is weight gain as much as 61.2% of all acceptors. The purpose of this study was to determine the relationship between the use of 3-month injectable contraceptives and weight gain at Berkah House of Midwife Katmi, Bekasi Regency in 2022. This research design is an analytic survey with a retrospective cross sectional approach. The study population was the total number of re-visiting 3-month injectable family planning acceptors, namely 130 people, with the sampling technique using the total population with the chi-square test analysis. Results; It was found that 3-month injectable contraceptive acceptors who experienced weight gain were 61 people (47%) of the total. Based on the Chi-square test results obtained a value of P = 1 > α = 0.05. It can be concluded that there is no relationship between the use of 3-month injectable contraceptives and maternal weight gain at Berkah House of Midwife Katmi, Bekasi Regency in 2022. It is hoped that midwives can increase knowledge and conduct further research on this research.

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1. INTRODUCTION

According to population studies in the USA, approximately 39% of the population over the age of 20 are obese. Among the causes of weight gain in women are associated with reproductive and obstetric complications such as menstrual irregularities, subfertility, endometrial hyperplasia and cancer, and poor obstetric and perinatal outcomes. Hormonal changes and associated inflammation can affect women's reproductive function [1].

One of the causes of weight gain in women of childbearing age in Indonesia is the use of hormonal contraceptives. This method of hormonal contraception is one with a high level of effectiveness. However, this does not mean that hormonal contraceptives do not have effects from their use. Side effects often experienced by acceptors are weight gain (61.2%), menstrual disorders (22.5%), gastrointestinal disorders (10%), black spots (3.8%), and decreased libido (2.5%) [2].

The results of a study entitled Overview of Modern Contraceptive Use in West Java Based on Sociodemographic Characteristics and Sources of Information, show that 3-month injections are the most widely used type of modern hormonal contraception [3].

In a study conducted by Sulastriningsih et al., (2023) examined the effect of weight gain on three-month injectable birth control acceptors at midwife K's independent practice in 2021 which took place at midwife K's independent practice, Cimanggis, Depok City in 2020. All 3-month injectable family planning acceptors who were at midwife K's independent practice with a total of 41 people. The results obtained from the study were that there was an effect of 3-month injectable contraception on maternal weight gain at the Gedong Air health center in Bandar Lampung in 2020, the statistical test results obtained p-value = 0, 016 (p-value> α = 0.05) [4].

Research with the title effect of 3-month injectable birth control on Weight Gain at Kampai village health post, Ogan Komering Ulu Regency in 2020 researched by Astriana, (2021) which uses an analytical survey method. The sample in this study were 3-month injectable birth control acceptor mothers, who were taken using the total population technique with a sample size of 30 injectable birth control acceptors. The results showed that there was a significant relationship between the effect of 3-month injectable birth control on weight gain at Kampai village health post, Ogan Komering Ulu

Regency in 2020. This is evidenced in the results of the chi-square statistical test p value 0.029 <0.05 [5].

In a study entitled The Relationship between the Use of 3-Month Injectable Contraceptives with Maternal Weight Gain at the Gunungsitoli City Linez Clinic researched by Prawita & Gulo, (2019) This research was conducted in 2018 is an Analytical Survey with a Cross Sectional approach method with research data collection using secondary data, with a sample of 90 respondents. The conclusion of this study is that there is a relationship between the use of 3-month injectable contraceptives and maternal weight gain at the Gunungsitoli City Linez Clinic in 2018 [6].

Preliminary studies conducted by researchers at the research site found weight gain in 13 3-month injectable birth control acceptors in December. Based on the observations of several studies above, the researcher wants to know about the relationship between the use of 3-month injectable contraceptives and weight gain at Berkah House of Midwife Katmi, Bekasi Regency in 2022.

2. METHOD

The research design applied in this study was analytical research using a retrospective cross-sectional study to analyze the relationship between the use of 3-month injectable contraceptives and weight gain at Berkah House of Midwife Katmi Bekasi Regency in 2022. Data collection from this study was using secondary data, namely patient data on 3-month injectable family planning acceptors at Berkah House of Midwife Katmi for the period January to December 2022. The study population is the total number of 3-month repeat visit birth control acceptors, namely 130 people, with the sampling technique using the total population with the chi-square test analysis.

3. RESULTS AND DISCUSSION

Univariate Analysis

Table 1. Frequency Distribution of Characteristics of 3-Month Injectable Family Planning Acceptors according to age and parity of mothers at Berkah House of Midwife Katmi in 2022

No.	Category	Frequency	Percentage
1	**Mother's age**		
	< 20 years	0 people	0 %
	20 – 35 years	82 people	63 %
	> 35 years	48 people	37 %
2	**Parity**		
	Having 1-2 children	87 people	67 %
	Having >2 children	43 people	33 %

Based on table 1 above, it can be seen that the age of mothers less than 20 years is 0 people. Maternal age 20 - 35 years amounted to 82 people (63%), and age 35 years and over amounted to 48 people (37%). The parity of mothers who have 1 - 2 children amounted to 87 people (67%), and having more than 2 children amounted to 43 people (33%) at Berkah House of Midwife Katmi, Bekasi Regency in 2022.

Table 2. Frequency distribution of weight changes in 3-month injectable birth control acceptors at Berkah House of Midwife Katmi in 2022

Weight Status	Total Acceptors	Percentage %
	N : 130 people	
weight gain	61	37%
Weight loss	51	39%
Stable	18	14%
Total	**130 People**	**100%**

Based on Table 2, it was found that 3-month injectable family planning acceptors who experienced weight gain were 61 people (37%), 3-month injectable family planning acceptors who

experienced weight loss were 51 people (39%) and 3-month injectable family planning acceptors who did not experience weight change were 18 people (14%), so the number of acceptors who did not experience weight gain was more than those who experienced weight gain at Berkah House of Midwife Katmi Bekasi Regency in 2022.

Table 3. Frequency distribution of weight changes in 3-month injectable birth control acceptors according to maternal parity at Berkah House of Midwife Katmi in 2022

Weight Status	1-2 Children		3-5 Children	
	Total	Percentage	Total	Percentage
weight gain	40	46%	21	49%
Weight loss	33	38%	18	42%
Stable	14	16%	4	9%
Total	**87**	**100%**	**43**	**100%**

Based on Table 3, it was found that 3-month injectable family planning acceptors who experienced weight gain with 1 - 2 children were 40 people (46%), who experienced a decrease of 33 people (38%), and who had a stable weight of 14 people (16%). Meanwhile, 3-month injectable family planning acceptors who have more than 2 children with an increase in body weight are 21 people (49%), who have lost weight are 18 people (42%) and who have not changed their weight are 4 people (9%), at Berkah House of Midwife Katmi Bekasi Regency in 2022.

Table 4. Frequency distribution of weight changes in 3-month injectable birth control acceptors according to the age of the mother at Berkah House of Midwife Katmi in 2022

Weight Status	Age <20		Age 20-35		Age >35	
	F	%	F	%	F	%
weight gain	0	0%	41	50%	20	42%
Weight loss	0	0%	28	34%	23	48%
Stable	0	0%	13	16%	5	10%
Total	**0**	**0%**	**82**	**100%**	**48**	**100%**

Based on Table 4, it was found that 3-month injectable family planning acceptors under the age of 20 years were 0%, that 3-month injectable family planning acceptors aged 20-35 years with weight gain amounted to 41 people (50%), who experienced weight loss as many as 28 people (34%), and who had a stable weight were 13 people (16%). Whereas in 3-month injectable family planning acceptors aged over 35 years who experienced weight gain were 20 people (42%), who experienced weight loss were 23 people (48%) who did not experience weight change, namely 5 people (10%), at Berkah House of Midwife Katmi Bekasi Regency in 2022.

Bivariate Analysis

Table 5. Relationship between the Use of 3-Month Injectable Contraceptives and Weight Gain at Berkah House of Midwife Katmi Bekasi Regency in 2022

3-month injectable family planning acceptors	Weight Gain		Weight loss		Stable weight		Total		*P-value*
	F	%	F	%	F	%	F	%	
Yes	61	47%	51	39%	18	14%	130	100%	
No	0	0%	0	0%	0	0%	0	0%	1
Total	**61**	**47%**	**51**	**39%**	**18**	**14%**	**130**	**100%**	

Based on Table 5, it was found that the number of acceptors who experienced weight gain was 61 people (47%), while family planning acceptors who did not experience weight gain were 51 people (39%) with weight loss and 18 people (14%) with stable weight, so the number who did not experience an increase was 69 people (53%).

From the results of the statistical test, the p-value 1> 0.05 was obtained, it can be concluded that Ho is accepted, namely that there is no relationship between the use of 3-month injectable contraceptives and weight gain at Berkah House of Midwife Katmi Bekasi Regency in 2022.

Table 6. Relationship between age and weight gain of 3-month injectable contraceptive acceptors at Berkah House of Midwife Katmi Bekasi Regency in 2022

Age	Body Weight				Total		*P-value*
	Increase		No Increase				
	N	%	N	%	N	%	
<20	0	0%	0	0%	0	0%	
20-35	41	50%	41	50%	82	100%	0.656
>35	20	42%	28	58%	48	100%	
Total	**61**	**47%**	**69**	**53%**	**130**	**100%**	

Based on the table, it is reported that out of 130 3-month injectable family planning acceptors, 82 acceptors with ages between 20-35 years, there were 41 (50%) acceptors who experienced weight gain, while out of 48 acceptors aged> 35 years, there were 20 (42%) acceptors who experienced weight gain. The statistical test results obtained p value = 0.656> 0.05, it can be concluded that Ho is accepted, meaning that statistically there is no significant relationship between age and weight gain in 3-month injectable contraceptive family planning acceptors at Berkah House of Midwife Katmi Bekasi Regency in 2022.

Table 7. Relationship between Age and Weight Gain of 3-Month Injectable Contraceptive Acceptors at Berkah House of Midwife Katmi Bekasi Regency in 2022

Number of Children	Body Weight				Total		*P-value*
	Increase		No Increase				
	N	%	N	%	N	%	
1 - 2	40	46%	47	54%	87	100%	0.759
3 - 5	21	49%	22	51%	43	100%	
Total	**61**	**47%**	**69**	**53%**	**130**	**100%**	

Based on the table, it is reported that out of 130 3-month injectable family planning acceptors, 87 acceptors who have 1 - 2 children, there are 40 (46%) acceptors who have gained weight, while out of 43 acceptors who have 3 - 5 children, there are 21 (49%) acceptors who have gained weight. The statistical test results obtained p value = 0.759> 0.05, it can be concluded that Ho is accepted, meaning that statistically there is no significant relationship between parity and weight gain in 3-month injectable contraceptive family planning acceptors at Berkah House of Midwife Katmi Bekasi Regency in 2022.

DISCUSSION

Respondent Characteristics

1. Age

Based on the results of the study, the majority of acceptors aged 20-35 years were 82 people (63%). According to Saifuddin in Harahap, (2021) the healthy reproductive age of a woman is between 20-35 years. So most of the acceptors are included in the healthy reproductive category. In line with the theory according to Sugeng (2019) which states that the age range of 20-35 years is the age for healthy reproduction, because at the age of over 35 years is the phase to end fertility after having two children [4].

A total of 48 people (37%) acceptors were in the category of unhealthy reproductive age or above 35 years but still used injectable contraceptives, which means that contraceptive use is used with the aim of ending fertility. According to Septianingrum, et al (2018) in their research said that the majority of family planning acceptors are reproductive age and show the results that the age factor is the factor that most influences the high acceptance of 3-month injectable family planning compared

to education, employment, income, and parity [7]. It can be concluded that this study shows that most of the acceptors are in the healthy reproductive category so that they have a low risk for family planning acceptors compared to family planning acceptors who are relatively old.

2. Parity

Based on the results of the study, the majority had 1 - 2 children, namely 87 people (67%) This is in line with research conducted by Sulastriningsih et al (2023) on the Effect of Weight Gain on three-month injectable family planning acceptors at midwife K's independent practice in 2021 [4]. But with a different conclusion, namely that there is no significant relationship between parity and weight gain.

Relationship between the use of 3-Month Injectable Contraceptives with Weight Gain

From the results of the study it was found that the number of acceptors who experienced weight gain was 61 people (47%), while family planning acceptors who did not experience weight gain were 51 people (39%) with decreased weight, and 18 people (14%) with stable weight, so the number who did not experience an increase was 69 people (53%).

From the results of the statistical test, the p-value 1> 0.05 was obtained, it can be concluded that there is no relationship between the use of 3-month injectable contraceptives and weight gain at Berkah House of Midwife Katmi, Bekasi Regency in 2022.

This is not the same as research conducted by Astriana, (2021) with the title The Effect of 3-Month Injectable Birth Control on Weight Gain at Kampai village health post, Ogan Komering Ulu Regency in 2020 that there is a relationship between the effect of 3-month injectable birth control on weight gain at Kampai village health post, Ogan Komering Ulu Regency in 2020 [5].

In the researcher's assumption, the absence of an increase in the weight of 3-month injectable family planning acceptors at Berkah House of Midwife Katmi in Bekasi Regency in 2022 is normal, because not everyone will experience the same side effects when using 3-month injectable contraceptives. There are many other factors that can cause the weight of 3-month injectable birth control acceptors to remain stable.

The influence of a healthy diet is very influential to improve the body's metabolism and control weight. The things that are considered with a healthy diet are by eating good nutrition, reducing excess salt consumption, eating apples, diligently exercising, and getting enough rest [8].

In the assumption of researchers, weight stability is also due to the important role of midwives in providing good information and counseling to 3-month injectable contraceptive acceptors regarding the side effects of weight gain that may occur after the use of contraceptives as well as recommendations to meet nutritional improvement patterns and regular exercise to overcome the side effects of 3-month injectable contraceptives, so that this can reduce the rate of weight gain in 3-month injectable contraceptive acceptors.

The success of weight loss in 3-month injectable contraceptive acceptors has been carried out by researchers Fitria et al., (2022) with the title Health Care for 3-Month Injectable family planning Contraception with Weight Gain that Disrupts Activities in Mrs.N in Nanggalo District, Padang City in 2021. Complaints of increased weight by 3-month injectable birth control acceptors can be overcome by providing comprehensive and consistent health care. At the first visit, explain the methods of good diet and exercise, at the second visit is to inform the results of the examination and monitor whether the mother has done the diet and exercise as recommended, and at the third visit inform the results of the examination to the mother, and monitor whether the mother has done the diet, exercise and continue to do senin kamis fasting [9].

The Relationship Between Age and Weight Gain of 3-Month Injectable Contraceptive Acceptors at Berkah House of Midwife Katmi Bekasi Regency in 2022

From the results of the study, it was found that as many as 130 acceptors of 3-month injectable family planning, 82 acceptors with ages between 20-35 years, there were 41 (50%) acceptors who experienced weight gain, while of the 48 acceptors aged> 35 years, there were 20 (42%) acceptors who experienced weight gain. The statistical test results obtained p value = 0.656> 0.05, it can be

concluded that there is no significant relationship between age and weight gain in 3-month injectable contraceptive family planning acceptors at Berkah House of Midwife Katmi Bekasi Regency in 2022.

This is not similar to research conducted by Sulastriningsih et al., (2023) with the title Effect of Weight Gain on Three-Month Injectable family planning acceptors at midwife K's independent practice in 2021 which states that there is a very significant relationship between age and the incidence of weight gain in three-month injectable family planning acceptor mothers at midwife K's independent practice in 2021 [4].

The Relationship between Parity and Weight Gain of 3-Month Injectable Contraceptive Acceptors at Berkah House of Midwife Katmi Bekasi Regency in 2022

Based on the table, it is reported that out of 130 3-month injectable family planning acceptors, 87 acceptors who have 1 - 2 children, there are 40 (46%) acceptors who have gained weight, while out of 43 acceptors who have 3 - 5 children, there are 21 (49%) acceptors who have gained weight. The statistical test results obtained p value = 0.759> 0.05, it can be concluded that Ho is accepted, meaning that statistically there is no significant relationship between parity and weight gain in 3-month injectable contraceptive family planning acceptors at Berkah House of Midwife Katmi Bekasi Regency in 2022.

This is not similar to research conducted by Sulastriningsih et al., (2023) with the title Effect of Weight Gain on Three-Month Injectable family planning acceptors at midwife K's independent practice in 2021 which states that there is a very significant relationship between parity and the incidence of weight gain in three-month injectable family planning acceptor mothers at midwife K's independent practice in 2021 [4].

4. CONCLUSION

It can be concluded that there is no significant relationship between the use of 3-month injectable contraceptives and the incidence of weight gain in three-month injectable birth control acceptor mothers at Berkah House of Midwife Katmi in 2022 with the results of a p value of 1> 0.05. And of the 130 samples studied, there were only 61 people who experienced weight gain and 69 people who did not experience weight gain. Then, there is also no relationship between confounding, namely age and parity on weight gain in 3-month injectable birth control acceptors at Berkah House of Midwife Katmi in 2022. It is hoped that midwives can add knowledge or conduct further research and evaluate the relationship between the use of 3-month injectable contraceptives and weight gain in their workplace. The results of this study are recommended for further research for future researchers with the addition of other factors or variables other than the relationship between the use of 3-month injectable contraceptives and weight gain with different research methods and population objects with greater coverage.

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